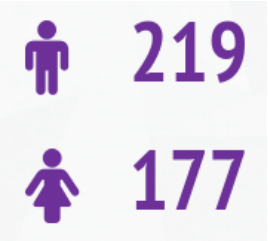
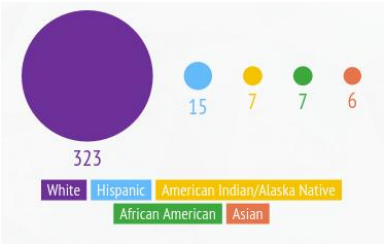
SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM-EDUCATION (SNAP-ED)

Results of an Impact Evaluation of a School Nutrition Education Program

BACKGROUND

During the 2012-2013 school year, 396 students at 22 elementary schools throughout Minnesota participated in seven *Go Wild with Fruits and Vegetables* classes taught by Extension's SNAP-Ed educators, as part of an impact evaluation of the SNAP-Ed Program. The evaluation protocol included group randomizations into two arms, with group 1 labeled "Treatment," and group 2 labeled "Delayed Control" which included one "True Control" group. Schools in the treatment group conducted classes in the fall, and the delayed-control group schools conducted classes in the spring. Educators collected data four times (see table below) or data collection points (DCPs), over the course of a year to understand the impact of Extension's health and nutrition programming in elementary schools.





Data Collection Timeline

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Treatment	1st.	Go Wild	2nd.			3rd.			Summer				4th.
Delayed Treatment	1st.		2nd.			3rd.	Go Wild		Summer				4th.
True Control	1st.		2nd.			3rd.			Summer				4th.

Data collected included:

- Measurement of the body mass indices (BMIs) of students given pedometers and encouraged to exercise more;
- Students' answers to survey questions about their fruit and vegetable consumption, physical activity, and other healthy habits;
- Parents' answers to surveys about their children.

This report includes key findings from the collection of data during these four times.

COMMENTS FROM PARENTS

We analyzed comments made by parents across all schools in response to the question, "Please share your comments about how the classes changed the healthy eating or physical activity of your child and your family." Across all 192 responses (63 percent of total numbers of parents with children in the program) two important themes emerged:

Propensity to Try New Foods

Each nutrition education session emphasizes the need for children to try new foods. The most common theme within the parent comments was that their children were much more willing to try new foods. Research shows that children who are excited about trying new things are more likely to acquire healthy eating habits and discover healthy foods they like. Encouraging exploration of new foods is a proven way to help people acquire healthy eating habits, especially children. A total of 48 percent of all respondents reported that their children were more willing to try new foods.

About trying new foods:
"I believe this program has made my child more aware of healthy eating and more willing to try new foods. I think this is a great program. Many times kids are unwilling to try new foods at home, but when others his age are trying them he is more willing."

Parents also said that conducting aspects of the nutrition program in school reinforced discussions around health already happening at home. In-school instruction also enabled positive social influence; if their peers were trying new fruits and vegetables, children were more apt to do so as well. What's more, when new, healthy behaviors are performed in the classroom the children participate in observational learning through peer modeling. Parents also appreciated their children's willingness to try new foods because it would not be as financially risky to buy foods they had not eaten before.

Ripple Effects on the Family

Parents also reported that their children's participation in the *Go Wild* program positively affected other family members' food-related habits, such as encouraging gardening or helping with food preparation. Other effects on family members other than children included changes in food selection and increased willingness to try new foods. A total of 32 percent of respondents said the program had influenced more people than just the children in their family. Here's what some parents had to say about effects of the *Go Wild* program on other family members:

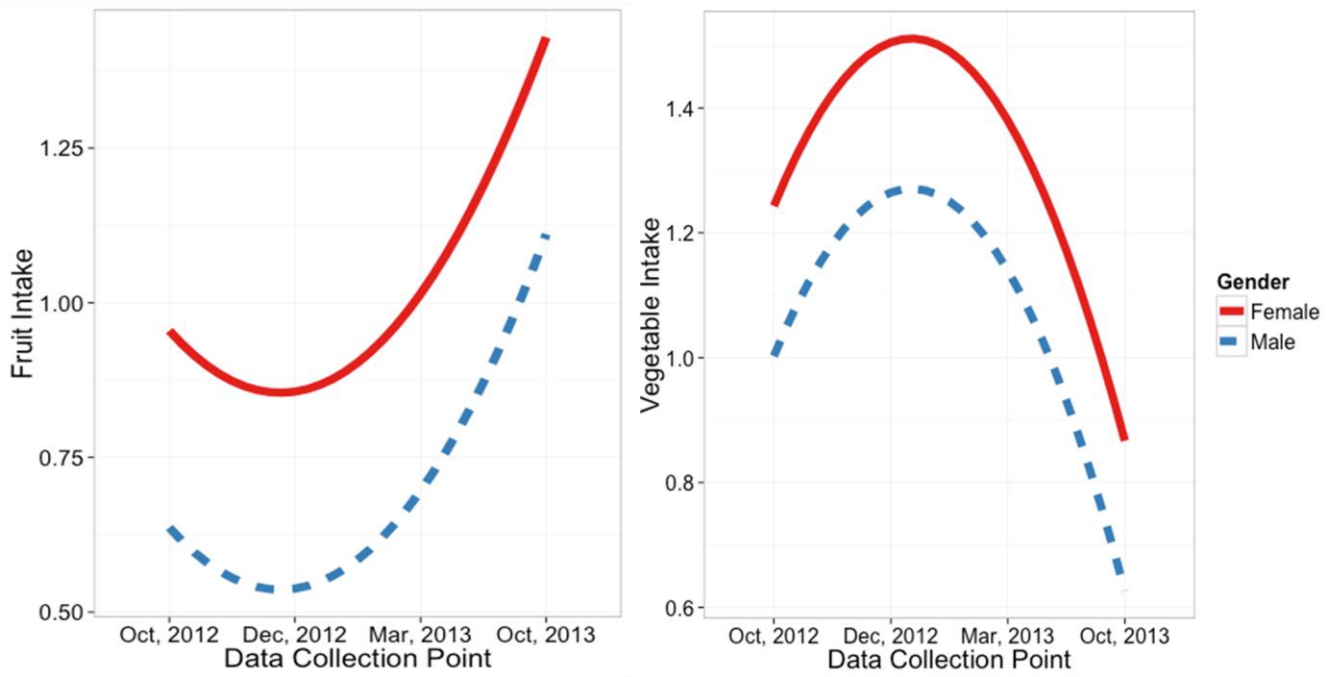
"My daughter wanted to try new fruits and vegetables, which in turn made me want to buy some of the ones I liked."

"My child … often expresses an interest in choosing something new to try in the produce department, which is wonderful to watch as a parent! She inquires frequently about various fruits and vegetables that she isn't familiar with. She particularly likes to present new or different items to her younger siblings and dad at suppertime."

FRUIT INTAKE INCREASED

Based on surveys, completed by students, there was an increase in fruit intake between October 2012 (DCP1) and October 2013 (DCP4). However, the students' vegetable intake increase in the short term but then decreased after summer. What's more, about a year following their participation in the nutrition program, the students continued to eat more fruits. Overall, female students ate more fruits and vegetables than boys. On average, female students ate 34 percent more fruits and 24 percent more vegetables than male students than before participation in the program.

Changes in fruit and vegetable intake of third-grade students who participated



	Fruit intake count per a day				Vegetable intake count per a day			
Gender	DCP1	DCP2	DCP3	DCP4	DCP1	DCP2	DCP3	DCP4
Female	0.96	0.89	1.04	1.43	1.21	1.48	1.37	0.86
Male	0.62	0.55	0.70	1.10	0.97	1.24	1.12	0.62

This general pattern of increasing fruit intake to a greater degree than vegetable intake is consistent with other published research. Other nutrition education programs like ours also report more success in increasing fruit intake than vegetable intake. Researchers attribute this to children's greater inclination toward fruits because of their sweeter taste than vegetables

Previous research shows that children's vegetable intake is harder to influence than fruit intake in children, and our study reinforced this. As a result, we will look at ways to emphasize the importance of increasing vegetable consumption in future nutrition education classes, while continuing to communicate the importance of eating fruits.

OBSERVATIONS

As noted, the nutrition program boosted only fruit intake over the long term. However, when we looked closer at the short-term data (pre-program to post-program), we found children *did* eat more vegetables. The messages about trying new things were convincing and the children were excited to try new vegetables — at least immediately following their participation in the nutrition classes.

We will be using this short-term data to inform how we conduct our nutrition education classes in the future. The ideas of "booster" (refresher) classes or holding them on a different timeline are being discussed. As the children seemed to respond better when the messages were fresh in their minds, they might benefit from more frequent classes or from holding classes throughout the school year.

Our analysis also suggested that the role of schools in nutrition education is critical. The school-level effects explained more than half (54 percent) of all variability in participants' choice of vegetables. As a result, we are revisiting our program delivery and collaboration with schools to strengthen them.

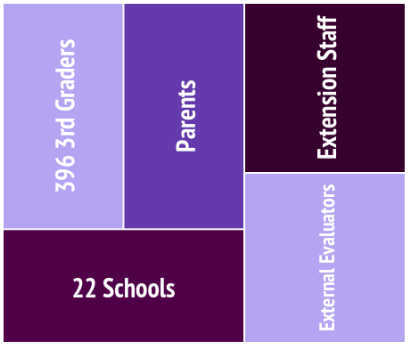
IMPORTANCE OF CONTINUOUS EVALUATION

Few longitudinal studies have been done to evaluate these kinds of nutrition education programs. This design has been beneficial to us, because it allowed us to learn so much more about participant attitudes and behaviors, as well as the lasting changes associated with the program. Had we only evaluated immediately following the program, our results we only would have seen the short-term effects.

Although the results suggest lasting behavior change only in fruit consumption, this evaluation was positive in another way since it helped us understand trends we need to know in order to adapt program components and delivery. As mentioned above we may focus on fruit and vegetable intake, and attending to program implementation. And, to repeat, we may adjust the timeline of our nutrition education program to respond to some of the lessons learned from this study.

FINAL OBSERVATIONS

This Impact Evaluation of the school nutrition program produced a variety of results, some significant and others not. The evaluation was extremely valuable in increasing our understanding of the benefits and limitations of a program like this one. Data like this helps us improve the effectiveness of all our nutrition education programs. This experience also raised the question of whether we need to revisit the dosage and intensity of elementary school programs or strengthen environmental factors in conjunction with nutrition education classes. This could also mean that we need to supplement our direct education efforts with other, more holistic efforts, such as working with food policies or collaborating with school wellness committees.



ACKNOWLEDGEMENTS

We want to thank all youth, parents, school staff, nutrition educators and advisers and other collaborators who contributed to this project. Most of all, thank you to the YOUTH! All of your support in collecting this important information was extremely valuable. Students and parents did a wonderful job collecting

all of this important data. This impact evaluation will contribute so much knowledge to the field of nutrition education classes nationally and to debates about increasing healthy behaviors of youth. It has only been possible because of the tremendous support of everyone involved. Thank you!!

QUESTIONS OR COMMENTS?

Contact your SNAP-Ed educator and regional coordinator or Misty Blue, Graduate Research Assistant at (612) 624-5956 blue0049@umn.edu.

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